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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/015,624	12/17/2001	Yuji Takahashi	P 290476 T36-139734M/AIO	7549

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EXAMINER

CHUNG, DAVID Y

ART UNIT PAPER NUMBER

2871

DATE MAILED: 07/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary

Application No.

10/015,624

Applicant(s)

TAKAHASHI ET AL.

Examiner

David Y. Chung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-26 is/are rejected.
- 7) ☒ Claim(s) 2 and 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-12, 17, 20-22, 25 and 26 rejected under 35 U.S.C. 102(e) as being anticipated by Mochizuki (U.S. 6,386,720).

As to claims 1, 8, 17 and 22, Mochizuki discloses a backlighting unit comprising a plurality of red, green, and blue LED's for illuminating an optical apparatus. A schematic view showing the basic construction of the light source device is shown in figure 1. In figure 1, a plurality of light emitting diodes (LED's) 3-1 to 3-n are arranged and mounted to the end surface 2 of the transparent light guide plate 1. Mochizuki teaches that by constructing the LED group by repeating the arrangement of a red LED, green LED, and a blue LED a plurality of times, a white linear light source or surface illuminant can be formed. See column 3, lines 38-44. Therefore, the numbers of red, green, and blue LED's are substantially equal. Figure 7 shows an optical apparatus

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including the light source device 16, light scattering sheet 160, and liquid crystal panel

17. See column 4, lines 50-65.

As to claims 4 and 9, Mochizuki discloses an optical apparatus wherein the backlight portion includes a planar light guide laminated to the liquid crystal panel as shown in figure 7. The LED's are disposed to face a side surface of the planar light guide as shown in figure 1.

As to claims 5 and 10, Mochizuki discloses that a reflecting plate is provided on each of the three end surfaces of light guide plate 1 other than the end surface on which the LED group is provided. See column 4, lines 21-28.

As to claims 6 and 11, Mochizuki discloses a controller 1000 for adjusting the luminance of each LED in the LED group as shown in figures 4 and 5. See column 4, lines 17-21.

As to claims 7 and 12, Mochizuki discloses that the liquid crystal panel modulates the illuminating light from the light source device 16 and forms an image. See column 4, lines 56-61.

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As to claims 20 and 25, Mochizuki discloses that the LED group is constructed by repeating the arrangement of a red LED, a green LED and a blue LED a plurality of times. See column 3, lines 38-40.

As to claims 21 and 26, Mochizuki discloses a planar light guide in figures 1, 4, 5 and 6.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 13-16, 18, 19, 23 and 24 rejected under 35 U.S.C. 103(a) as being unpatentable over Mochizuki (U.S. 6,386,720).

Mochizuki does not disclose that the liquid crystal panel 17 in figure 7 contains twisted nematic (TN) or super twisted nematic (STN) liquid crystal. However, TN and STN liquid crystal panels were common and conventional at the time of invention. It would have been obvious to one of ordinary skill in the art at the time of invention to use a TN or STN liquid crystal panel because of the benefits associated with conventional

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devices such as well-understood behavior, and well-established supply chains and manufacturing methodologies.


Allowable Subject Matter

3. Claims 2 and 3 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: none of the prior art taught or suggested a liquid crystal display as recited in claim 1, wherein the number of blue LED's is larger than the number of green LED's.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Chung whose telephone number is (703) 306-0155. The examiner can normally be reached on Monday-Friday from 8:30 am to 5:00 pm.


ROBERT H. KIM
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David Chung
GAU 2871
06/27/03